

## **Alkali metal cation adsorption on oxide surfaces**

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Alkali metal cations (AMCs) have traditionally been viewed as binding non-specifically to oxide surfaces with the possible exception of  $\text{Li}^+$ . This view stems from their more or less inert behavior in low to moderate ionic strength homogeneous solutions when paired with anions such as  $\text{Cl}^-$  or  $\text{NO}_3^-$ . In fact, such solutions find widespread use as ionic strength buffers for surface charge and ion adsorption studies. However, our group, among others, has definitively demonstrated that inner-sphere binding of AMCs is the rule rather than the exception for oxides as diverse as rutile and quartz. This contribution will review the experimental and computational evidence for inner-sphere binding of AMCs, and the implications of such binding for surface complexation models.